

Epidemiology Newsletter

Health Service Region 8 (HSR 8)

This newsletter aims to provide valuable information to our stakeholders that aide in notifiable conditions reporting for prevention and control of disease outbreaks. It is a collaboration of DSHS HSR 8, San Antonio Metropolitan Health District, Comal County Health Department, Medina County Health Unit, and Victoria City-County Health Department.



Summer 2014

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Arboviral Surveillance

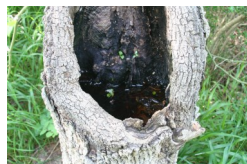
Dengue and Chikungunya

Dengue is caused by a complex of flaviviruses that are well established in the tropics of Central and South America, the Caribbean, Mexico, SE Asia and Africa. With travel and immigration, dengue can occur in the US at any time. This disease is caused by four distinct strains of virus (DENV 1, DENV 2, DENV 3, DENV 4). The virus that causes Chikungunya is an alphavirus in the family Togaviridae. Dengue and Chikungunya are transmitted by the Yellow Fever Mosquito (*Aedes aegypti*) and the Asian Tiger Mosquito (*Aedes albopictus*). *Aedes aegypti* and *Aedes albopictus* are active, and will readily bite, during the day whereas many other species are active mainly from dusk until dawn. Both of these container/ tree hole breeding species of mosquitoes are well established in a large portion of the United States including Texas. Despite the widespread presence of suitable vector species and occurrence of several imported cases, thus far, no local transmission of Chikungunya has been documented in the State of Texas. There have been two locally-acquired Chikungunya cases reported in Florida. There have been ten imported Texas cases of chikungunya as of August 5, with one in Bexar County. The symptoms of Chikungunya are very similar to dengue with severe joint pain and fever being the most common symptoms reported. Because of this it is recommended that people presenting with these clinical signs be tested for both dengue and Chikungunya at the same time. Testing for both are available through commercial laboratories. Confirmatory laboratory testing for chikungunya, if needed, is available for clinically diagnosed cases through the Centers for Disease Control and Prevention; confirmatory testing for dengue is available through the DSHS laboratory.

For those in Bexar County, please contact San Antonio Metropolitan Health District at **210-207-8876**. For all others, please contact DSHS, Health Service Region 8 at **210-949-2000** or **210-949-2121**.



Aedes aegypti, photo courtesy of Dr. Wozniak



Tree hole breeding site of *Aedes albopictus*, photo courtesy of Dr. Wozniak



Aedes albopictus, photo courtesy of Dr. Wozniak

West Nile Virus, St. Louis Encephalitis, Eastern Equine Encephalitis, Western Equine Encephalitis

The West Nile virus (WNV), St. Louis Encephalitis (SLE), Eastern Equine Encephalitis (EEE), Western Equine Encephalitis (WEE) are all either established or endemic to the region and could emerge at any time. The West Nile Virus and St. Louis Encephalitis viruses are both members of the family Flaviviridae. Eastern and western equine encephalitis viruses are both in the family Togaviridae. Ongoing annual surveillance for all of these pathogens has shown WNV to be the most prevalent agent of the group followed by WEE, SLE and lastly EEE. For reasons that are not fully understood, the number of human cases of WNV infection seen annually is quite variable and seem to occur in a somewhat cyclic pattern. Thus far in 2014, there have been 15 human cases of West Nile illness in Texas. Although it has not yet been seen in Texas in 2014, recent surveillance activity has documented EEE virus activity in several eastern and southeastern states.

Although the severity of disease varies somewhat between the different viruses with EEE being associated with the most severe human disease and WEE the least, the signs and symptoms of any of these arboviral infections can be very non-specific and flu-like in nature. Some cases may become more severe with the development of encephalitis, high fever, chills, vomiting, disorientation, and seizures. Infection by both the WNV and SLE virus can range from mild flu-like signs to severe neurologic disease that can result in permanent impairment or even death. Some of the known risk factors for developing severe disease include advanced age (> 50 yrs), hypertension, and underlying chronic medical conditions such as heart disease, cancer and diabetes. Laboratory tests are needed to confirm infection by any of these viruses. Since there are no effective anti-viral agents for these pathogens, the diseases are treated symptomatically.

DSHS HSR 8

7430 Louis Pasteur Drive
San Antonio, TX 78229-4509

Phone: 210-949-2000

Public Health Emergencies or

Immediately Reportable

Diseases: 210-949-2121

San Antonio Metropolitan Health District

332 W Commerce Street
San Antonio, TX 78205

Phone: 210-207-8731

Comal County Health Department

178 E Mill Street, Suite 210
New Braunfels, Texas 78130

Phone: 830-221-1150

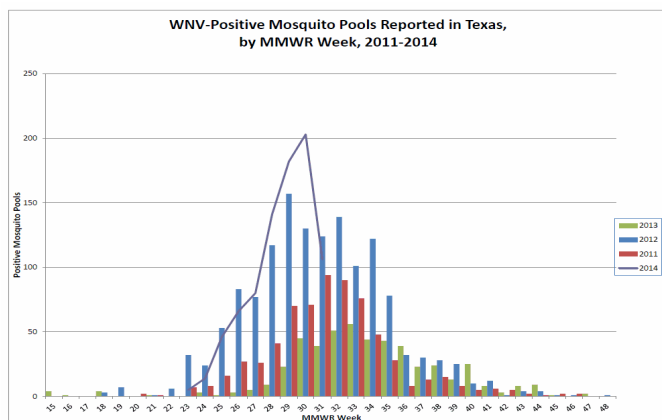
Medina County Health Unit

3103 Avenue G
Hondo, Texas 78861
Phone: 830-741-6191

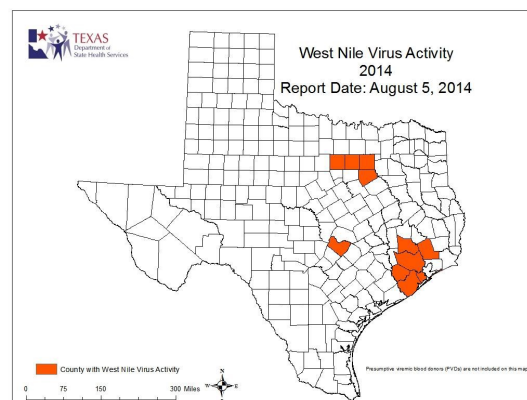
Victoria City-County Health Department

2805 N. Navarro
Victoria, Texas 77901
Phone: 361-578-6281

Arboviral Surveillance Continued...



Texas Counties Reporting any West Nile Virus Activity, January 1—August 2, 2014



Arbovirus Activity Summary, Texas, January - July, 2014

Virus	Mosquito			Avian	Equine	Human						Total
	DSHS Lab Reports	Non-DSHS Lab Reports	Total (Mosquito pools)			Fever	Neuroinvasive	Hemorrhagic Fever	Total (Human)	Deaths	PVD‡	
Chikungunya*						10			10			10
Dengue*						7			7			7
Eastern Equine Encephalitis												0
Saint Louis Encephalitis												0
West Nile	123	722	845	29		7	8		15		17	889
Total Reports	123	722	845	29	0	24	8	0	32	0		906

*All reported cases are imported.

‡PVD - Presumptive viremic blood donors are people who had no symptoms at the time of donating blood through a blood collection agency, but whose blood tested positive when screened for the presence of West Nile virus. Unless they meet the case reporting criteria, they are not counted as a case for official reporting purposes and are not included in the "total reports" column.

Laboratory Submission Tidbits

Isolates must be sent to DSHS lab for the following conditions:

- Anthrax
- Botulism
- Brucellosis
- Shiga toxin-producing *Escherichia coli*
- Listeriosis
- Meningococcal infections, invasive
- Plague
- *Staph aureus*, vancomycin-resistant
- Tuberculosis
- Tularemia
- *Vibrio* infection, including cholera

A unified effort is needed to ensure accurate and consistent specimen submission procedures among DSHS, Local Health departments, and all other key players in disease/laboratory reporting, such as health providers, clinics and hospital laboratories.

Specimen Collection

Please exercise care to ensure quality samples are submitted to the laboratory. The laboratory operates in keeping with departmental policies, licensure, and mission; and will only test specimens collected and submitted according to DSHS lab guidelines. Important points to consider:

- Note expiration date on media to ensure medium is still viable.
- Make sure the date of collection is provided on the specimen submission form and on the specimen as the lab monitors the interval between collection and receipt of time-sensitive specimens.
- Ensure demographic information on lab submission form matches information on specimen collection tube.

Specimen Shipping

Please use proper mailing containers and thoroughly complete the state lab submission forms. There are multiple forms for specific specimen collection. The most common state lab form is the **G-2A Microbiology Submission Form**.

Packaging and labeling must be in conformity with state/federal transport regulations. When using any carrier, submitters must package specimens to avoid leakage or breakage. Specimens must be packed in triple containment with sufficient absorbent material enclosed to absorb the entire volume of liquid.

Only ship specimens to the state laboratory Monday through Thursday and please keep in mind that the laboratory is closed for state holidays. Please see the table for state holidays for the remainder of 2014.

Holiday	Date
LBJ's Birthday	08-27-14
Labor Day	9-01-14
Rosh Hashanah	9-25-14
Rosh Hashanah	9-26-14
Veterans Day	11-11-14
Thanksgiving Day	11-27-14
Day after Thanksgiving	11-28-14
Christmas Eve Day	12-24-14
Christmas Day	12-25-14
Day after Christmas	12-26-14

Influenza Surveillance

The official influenza reporting season for the United States begins in October and continues through May. Influenza is monitored through multiple ways: pediatric influenza deaths, influenza outbreaks, novel influenza, which are all reportable, and sentinel surveillance, which is voluntary. Nineteen influenza-associated pediatric deaths were reported in Texas during the 2013-2014 influenza season.

Sentinel Surveillance

Individual cases are not tracked; however, sentinel surveillance partners and ILI surveillance partners in the state provide voluntary information. Effective surveillance of Influenza and Influenza-Like-Illness (ILI) requires a multi-faceted approach. Volunteers participate in one of four projects: ILI Surveillance, Influenza Surveillance, Laboratory Surveillance, and ILINet.

• ILI Surveillance

Providers report ILI activity each week based on the facility type and what type of testing, if any, is done at the facility. For instance, a school nurse is an ILI Surveillance Partner, and reports ILI activity when he/she sees a student in the clinic who meets the case definition for ILI (fever $>100^{\circ}\text{F}$ and cough or sore throat) without testing for influenza. Other ILI Surveillance Partners are daycare centers, employee wellness clinics, nursing homes, and churches.

• Influenza Surveillance

Because physicians, hospitals, and urgent care clinics test for influenza, the information they provide includes the type of flu that is detected in their patients each week. Providers who report this type of flu activity are called Influenza Surveillance Partners.

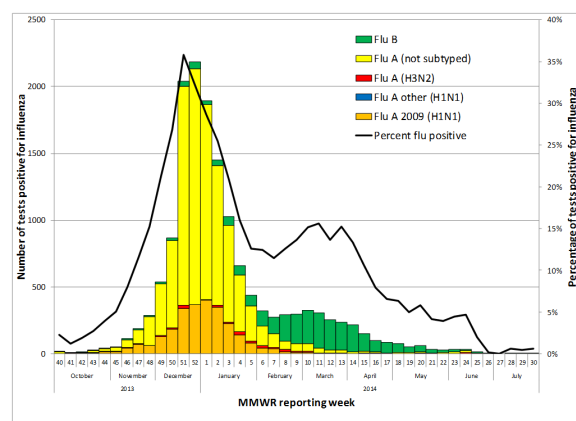
• Laboratory Surveillance

These providers collect specimens each week and submit them to the DSHS Laboratory for PCR testing. This type of testing is very specific and can detect the type and subtype of flu that is circulating. A participating Laboratory Surveillance Partner played a vital role in detecting the first case of Novel H1N1 virus in 2009. Laboratory Surveillance Partners receive free testing supplies from DSHS and are a valuable resource to flu surveillance in Texas.

• ILINet

An ILINet provider conducts surveillance for influenza-like illness (ILI) in collaboration with the state health department and the Centers for Disease Control and Prevention. The Outpatient Influenza-like Illness Surveillance Network (ILINet) consists of more than 3,000 healthcare providers in all 50 states.

Laboratory Surveillance: Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas Laboratories, 2013-2014 Season



What data do ILINet providers collect? How and to whom are data reported?

ILINet providers report each week the total number of patients seen for any reason and the number of patient visits for influenza-like illness (ILI) by age group (0-4 years, 5-24 years, 25-49 years, 50-64 years, >65 years). These data are transmitted once a week via the Internet or fax to a central data repository at CDC. Most providers report that it takes them **fewer than 30 minutes a week** to compile and report their data.

Who can be an ILINet Provider?

Providers of any specialty in any type of practice are eligible to be ILINet providers.

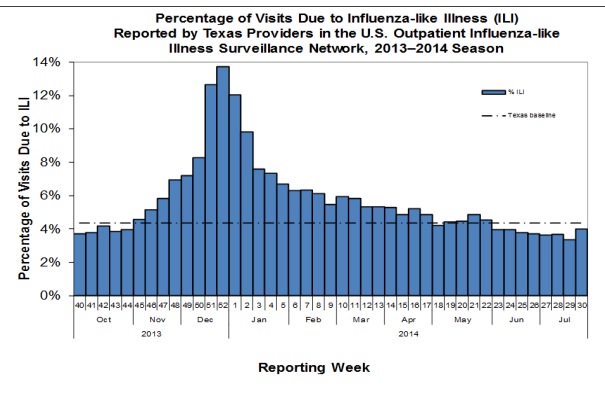
- Emergency Medicine
- Family Practice
- Infectious Disease
- Internal Medicine
- OB/GYN
- Pediatrics
- Student Health Center
- Urgent Care Center

Practice settings that are **not eligible** are elementary, middle, or high school health centers, and any type of institutional setting such as nursing homes or prisons.

Why Volunteer?

Influenza viruses are constantly evolving and cause substantial morbidity and mortality. **ILINet data is critical for monitoring the course of flu virus activity on the local, state, and national level.** Also, ILINet data, in combination with other influenza surveillance data, can be used to guide prevention and control activities, vaccine strain selection, and patient care. The most important consideration is that the data provided are critical for protecting the public's health.

If your facility is interested in participating in ILI Surveillance, Influenza Surveillance, Laboratory Surveillance, or ILINet, please contact Connie Alaniz at connie.alaniz@dshs.state.tx.us. Participation is easy, free, and valuable to the health of Texans.



Enteric Illnesses

Increase of *Cyclospora* infections in Texas; recommendation to test patients with consistent symptoms

The Texas Department of State Health Services is encouraging healthcare providers to test patients for *Cyclospora* if they have diarrheal illness lasting more than a few days or diarrhea accompanied by severe anorexia or fatigue. **Diagnosis of cyclosporiasis requires submission of stool specimens for “Ova and Parasite” testing with additional specific orders for *Cyclospora* identification.** A single negative stool specimen does not exclude the diagnosis; three specimens are optimal.

As of August 4, 136 cases of *Cyclospora* infection have been reported to the Texas Department of State Health Services this year. Public health is investigating the increased number of cases of *Cyclospora* infections to identify possible common exposures.

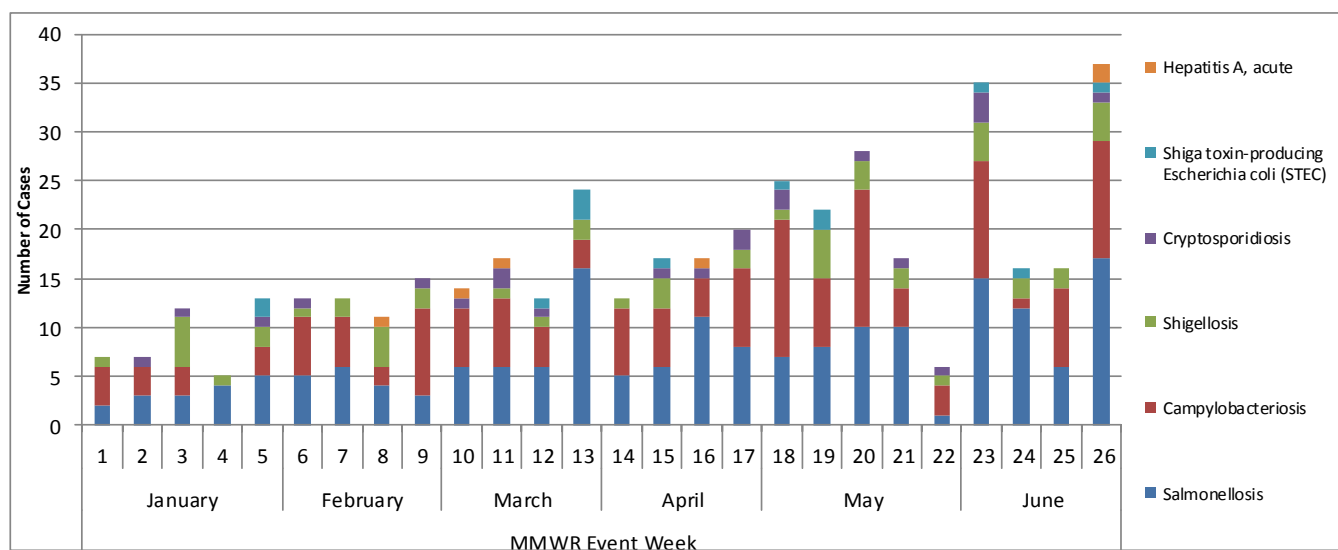
Symptoms of cyclosporiasis usually begin 2 to 14 days after ingestion of oocysts in contaminated food or water. Profuse diarrhea can last weeks to months, and may relapse. Additional symptoms may include anorexia, fatigue, weight loss, abdominal cramps, bloating, increased gas, nausea, vomiting, and low grade fever.

Although no common exposure source for this increase in cases has yet been identified, past outbreaks in the U.S. have been associated with consumption of imported fresh produce, including fresh cilantro, pre-packaged salad mix, raspberries, basil, snow peas, and mesclun lettuce. Thorough washing of fresh produce is recommended, but may not eliminate the risk of transmission since *Cyclospora* can be difficult to wash off all types of produce. Infection is generally not transmitted directly from person-to-person.

Healthcare providers and laboratories should promptly report confirmed cyclosporiasis cases to San Antonio Metropolitan Health District at **210-207-8876** or DSHS, Health Service Region 8 at **210-949-2000** or **210-949-2121**.

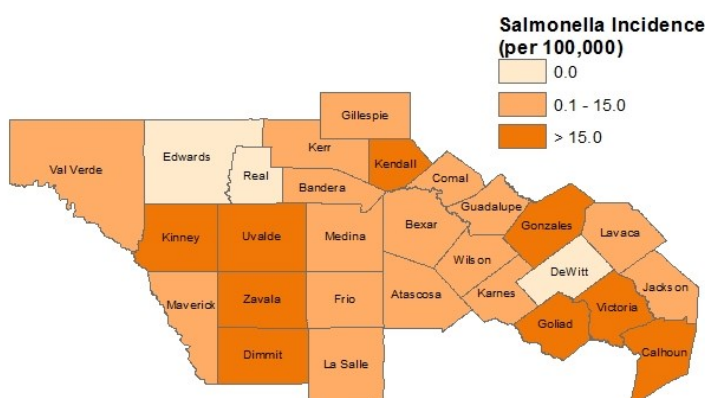
Information about *Cyclospora* is available at: www.cdc.gov/parasites/cyclosporiasis/health_professionals/index.html

Number of Enteric Illnesses Reported, Health Service Region 8, January—June 2014



*Event Week is defined in hierarchical order onset date, diagnosis date, report to county date, report to state date, date investigation created

Salmonellosis Incidence, Health Service Region 8, January—June 2014



Region 8 Notifiable Conditions Report, January - June*

	Atascosa		Bandera		Bexar		Calhoun		Comal		De Witt		Dimmit		Edwards		Frio		Gillespie	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Amebiasis					12	6														
Babesiosis					1															
Botulism, infant		1			1															
Brucellosis					2	1														
Campylobacteriosis	1	2	2	3	135	94	1	3	6	2	3				1		3	2	6	7
Chagas, chronic indeterminate		1				1														
Chagas, chronic symptomatic																				
Chlamydia	110	95	6	7	5954	**	38	41	166	158	61	30	38	31	5	2	41	51	13	31
Creutzfeldt-Jakob Disease					1															
Cryptosporidiosis				1	16	12	1	3											2	1
Cyclosporiasis						2			1											
Ehrlichiosis, chaffeensis					1															
Gonorrhea	24	11	3	2	1599	**	15	6	22	22	13	14	4	10			15	12		3
Haemophilus influenzae, invasive					1															
Hemolytic uremic synd, postdiarrheal																				
Hepatitis A, acute					4	4			1	1										
Hepatitis B, acute					3	2			1	1										
Hepatitis C, acute					1	3											1			
Hepatitis E, acute																				
Influenza-associated pediatric mortality					2															
Legionellosis					9	8			1	2										
Leishmaniasis						1														
Listeriosis																				
Lyme disease					1															
Malaria																				1
Mumps					2															1
Neisseria meningitidis, invasive (Mening. disease)																				
Pertussis	14		4	1	52	39		1	11	4							1			
Q fever, Chronic																				
Salmonellosis	7	5	3	1	89	125	2	4	13	11	2		2		1		3	2	5	1
Shiga toxin-producing Escherichia coli (STEC)					16	8		1	1											
Shigellosis	2	1		3	35	46		1	1		1								1	
Spotted Fever Rickettsiosis						1														
Strep, other, invasive, beta-hem (non-A nonB)																				
Streptococcus pneumoniae, invasive disease (IPD)	2	1	2	1	90	59	1		2	3	2	2					1	1	1	3
Streptococcus, invasive Group A	1	2			9	19			2	7							2			1
Streptococcus, invasive Group B	1	1	1	1	45	60		1	1	3							2		3	1
Syphilis	7	2			543	480		1	9	10	1	1	1	1			5	2		2
Tuberculosis	1	2			37	34	2	1	2						1		4	10		
Tularemia									1											
Typhoid fever (Salmonella typhi)	1												1							
Typhus fever-fleaborne, murine					2	1														
Vancomycin-intermediate Staph aureus (VISA)					1															
Varicella (Chickenpox)	2	1		2	64	43			7	10	1		5	1			32	12	1	2
Vibriosis, other or unspecified					2	1														
Yersiniosis											1									

*All data is provisional and subject to change, spaces indicate no cases reported

**Data not available

Region 8 Notifiable Conditions Report, January - June*

	Goliad		Gonzales		Guadalupe		Jackson		Karnes		Kendall		Kerr		Kinney		La Salle		Lavaca	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Amebiasis											1		1							
Babesiosis																				
Botulism, infant																				
Brucellosis																				
Campylobacteriosis	1		4	7	17	14			2		2	8	4	3	1		1	1	1	3
Chagas, chronic indeterminate																				
Chagas, chronic symptomatic																				
Chlamydia	5	6	54	49	193	168	20	19	19	21	60	39	60	57	5	4	10	8	11	12
Creutzfeldt-Jakob Disease																				
Cryptosporidiosis							1						2						1	4
Cyclosporiasis					1															
Ehrlichiosis, chaffeensis																				
Gonorrhea	3	1	12	10	40	43	4	4	1	6	3	5	5	1	3		2	1	4	8
Haemophilus influenzae, invasive																				
Hemolytic uremic synd, postdiarrheal																				
Hepatitis A, acute					1															
Hepatitis B, acute					1						1		1							
Hepatitis C, acute					1								1	1						
Hepatitis E, acute																				
Influenza-associated pediatric mortality																				
Legionellosis					1				1				1	2						
Leishmaniasis																				
Listeriosis																			1	
Lyme disease									1											
Malaria																				
Mumps																				
Neisseria meningitidis, invasive (Mening. disease)							1													
Pertussis			1		9	6	1		1		1	1	3						1	
Q fever, Chronic												1								
Salmonellosis	1	3	9	5	11	6	1	1	2		5	7	3	5	1		1		7	1
Shiga toxin-producing Escherichia coli (STEC)			1		2		1										1		1	
Shigellosis			1	2	2	1					1		1							
Spotted Fever Rickettsiosis																				
Strep, other, invasive, beta-hem (non-A nonB)																				
Streptococcus pneumoniae, invasive disease (IPD)	1		6		9	7			1		2		1	2					1	
Streptococcus, invasive Group A	1				2	2					1		1	1			1			
Streptococcus, invasive Group B			1		3	3			1	1			3							
Syphilis			1	1	9	9	2		4		2	3	1	3	1					
Tuberculosis					1				1	1			1	1						
Tularemia																				
Typhoid fever (Salmonella typhi)																				
Typhus fever-fleaborne, murine									1											
Vancomycin-intermediate Staph aureus (VISA)																				
Varicella (Chickenpox)			1		8	13	1		1		1		1	2			2			
Vibriosis, other or unspecified																			1	
Yersiniosis													2	2						

*All data is provisional and subject to change, spaces indicate no cases reported

Region 8 Notifiable Conditions Report, January - June*

	Maverick		Medina		Real		Uvalde		Val Verde		Victoria		Wilson		Zavala		Region 8	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Amebiasis																	12	8
Babesiosis																	1	0
Botulism, infant																	1	1
Brucellosis																	2	1
Campylobacteriosis	2	12	3	2			2	2	6	2	12	9	1	4			213	184
Chagas, chronic indeterminate											1						1	2
Chagas, chronic symptomatic											1						0	1
Chlamydia	133	135	62	36	7	8	89	70	91	114	268	238	49	31	34	23	7602	1484
Creutzfeldt-Jakob Disease																	1	0
Cryptosporidiosis				1													23	22
Cyclosporiasis											1						2	3
Ehrlichiosis, chaffeensis																	1	0
Gonorrhea	18	23	13	9	2	2	7	18	16	22	73	75	10	5	3	1	1914	314
Haemophilus influenzae, invasive																	1	0
Hemolytic uremic synd, postdiarrheal													1				1	0
Hepatitis A, acute				1													6	6
Hepatitis B, acute													1				7	4
Hepatitis C, acute																	3	5
Hepatitis E, acute											1						0	1
Influenza-associated pediatric mortality																	2	0
Legionellosis													1				13	13
Leishmaniasis																	0	1
Listeriosis																	1	0
Lyme disease																	1	1
Malaria																	0	1
Mumps																	2	1
Neisseria meningitidis, invasive (Mening. disease)																	1	0
Pertussis			3	4			3						2				100	63
Q fever, Chronic																	0	1
Salmonellosis	3	3	3	3	1		4	5	9	5	14	15	7	6	1	2	204	222
Shiga toxin-producing Escherichia coli (STEC)	1			1							1		2	1			23	15
Shigellosis				1					2	1	2		1				46	60
Spotted Fever Rickettsiosis																	0	1
Strep, other, invasive, beta-hem (non-A nonB)									1								1	0
Streptococcus pneumoniae, invasive disease (IPD)			2	1					2	2	2		3				128	85
Streptococcus, invasive Group A																	18	34
Streptococcus, invasive Group B	3	3		1					3				2	1			68	77
Syphilis	3	6	3	7			2	1	5	5	17	3	3	4			615	545
Tuberculosis	2	6							4	2	1				1		58	57
Tularemia																	1	0
Typhoid fever (Salmonella typhi)		1															1	2
Typhus fever-fleaborne, murine																	2	2
Vancomycin-intermediate Staph aureus (VISA)																	1	0
Varicella (Chickenpox)	3	8					1		5	5	1	2	1		5	2	139	107
Vibriosis, other or unspecified																	3	1
Yersiniosis											2	1					4	4

*All data is provisional and subject to change, spaces indicate no cases reported

Please email Jessica.Deerin@dshs.state.tx.us to be added to the distribution list for the HSR 8 Quarterly Epidemiology Newsletter.